JPRS 75280

11 March 1980

# Japan Report

No. 93

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POLITICAL AND SOCIOLOGICAL

GOVERNMENT TO SEND REFUGEE SURVEY MISSIONS TO HONG KONG, ASEAN

OW241121 Hong Kong AFP in English 0724 GMT 24 Feb 80 OW

[Text] Tokyo, 24 Feb (AFP)--Japan will send survey missions to five Southeast Asian countries and Hong Kong starting February 28 to facilitate settlement of Indochinese refugees in this country.

Two missions each of four, five officials are scheduled to leave for Thailand and Malaysia on February 28. Four other groups will go to Indonesia, the Philippines, Singapore and Hong Kong by mid-March.

The missions will consist of officials of the Asia Education and Welfare Foundations Refugee Work Headquarters, government officials and former Japan overseas cooperation volunteers.

The government sent advanced parties to the five countries and Hong Kong last month and four that there were more than 100 refugees wishing to settle in Japan. [sentence as heard]

The missions will interview those refugees to screen eligibles for settlement in Japan.

The missions will also interview 242 refugees who applied for visas to Japan.

Japan has so far allowed 154 refugees to reside in the country under the limit of 500.

Japan's second refugees settlement center will open in Yamato, in the western suburbs of Tokyo, this week to increase capacity to accommodate refugees.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

## BRIEFS

U.S.-JAPAN EXTRADITION TREATY--Tokyo, 19 Feb, KYODO--The government decided Tuesday to exchange instruments of ratification of the new Japan-U.S. extradition treaty with the U.S. Government in Washington this month. The treaty, replacing a pact concluded in 1886, was signed in Tokyo on 3 March 1978. It will go into force a month after the exchange of ratification instruments. The new treaty lists 47 offenses as extraditable, compared with 15 offenses under the old pact. The 16-article treaty also provides for the extradition of any fugitive charged with most offenses punishable by "death, life imprisonment or deprivation of liberty for a period of more than one year" under the laws of either country. [Text] [OW190218 Tokyo KYODO in English 0202 GMT 19 Feb 80 OW]

CSO: 4120

MILITARY

DETAILS OF FY '80 DEFENSE BUDGET DRAFT REVEALED

Tokyo JPE AVIATION REPORT-WEEKLY in English 6 F › 80 pp 6-9

[Text]

The Japanese Defense Agency (JDA) revealed at the end of January details of the cabinet's defense budget draft for FY 1980. Important parts of the draft follow:

* Breakdown by organizations

(Unit: ¥1 million)

| Organization | FY '80 | FY '79 | Up % from FY '79 |
|---|---|---|---|
| JDA | | | |
| GSDF | 887,275 | 859,871 | 3.2% |
| MSDF | 509,657 | 454,004 | 12.3% |
| ASDF | 514,435 | 482,653 | 6.6% |
| sub-total | 1,911,367 | 1,796,528 | 6.4% |
| JDA Bureaus | 6,771 | 6,845 | -1.1% |
| Joint Staff Council | 843 | 803 | 4.9% |
| Defense Staff College | 785 | 897 | -12.5% |
| Defense Academy | 8,902 | 8,677 | 2.6% |
| Defense Medical College (DMC) | 9,336 | 8,591 | 8.7% |
| Technical R&D Institute (TR&DI) | 28,770 | 26,843 | 7.2% |
| Central Procurement Office | 3,686 | 3,438 | 7.2% |
| sub-total | 59,092 | 56,094 | 5.3% |
| Total - JDA | 1,970,459 | 1,852,622 | 6.4% |

| Organization | FY '80 | FY '79 | Up % from FY '79 |
|---|---|---|---|
| Defense Facilities Administration Agency | 253,214 | 234,574 | 7.9% |
| Ministry of Finance (Special Account) | 6,404 | 7,171 | -10.7% |
| National Defense Council | 125 | 123 | 2.1% |
| Grand Total | 2,230,202 | 2,094,489 | 6.5% |

* Aircraft procurement

(Unit: ¥1 million)

| Aircraft | Number | FY '80 Expenditure | Follow-on Balance | Total |
|---|---|---|---|---|
| - GSDF | | | | |
| OH-6D light observation helicopters | 10 | 118 | 1,714 | 1,832 |
| HU-1H multi-mission helicopters | 5 | 185 | 2,318 | 2,503 |
| V-107A transport helicopter | 1 | 89 | 1,023 | 1,112 |
| LR-1 liaison/reconnaissance turboprop aircraft | 2 | 59 | 842 | 901 |
| TL-1 trainer | 2 | 21 | 282 | 303 |
| sub-total | 20 | 472 | 6,178 | 6,650 |
| - MSDF | | | | |
| P-3C antisubmarine aircraft | 10 | 1,396 | 94,727 | 96,123 |
| US-1 search/rescue flyingboat | 1 | 283 | 5,589 | 5,872 |
| TC-90 instrument flight trainers | 2 | 81 | 708 | 788 |
| HSS-2B anti-sub helicopters | 2 | 178 | 5,085 | 5,263 |
| sub-total | 15 | 1,938 | 106,108 | 108,046 |

| Aircraft | Number | FY '80 Expenditure | Follow-on Balance | Total |
|---|---|---|---|---|
| - ASDF | | | | |
| F-15 fighter-interceptors | 34 | 2,258 | 285,005 | 287,263 |
| F-1 support fighter | 1 | 303 | 6,377 | 6,680 |
| T-2 advanced trainers | 4 | 329 | 7,857 | 8,187 |
| T-3 primary trainers | 6 | 38 | 892 | 931 |
| MU-2 search/rescue aircraft | 1 | 34 | 470 | 504 |
| V-107A search/rescue helicopters | 2 | 226 | 2,447 | 2,673 |
| sub-total | 50 | 3,189 | 303,049 | 306,237 |
| TOTAL | 85 | 5,599 | 415,335 | 420,933 |

* GSDF Ground Equipment

(Unit: ¥1 million)

| ITEM | ORIGINAL REQUEST | APPROVED | AMOUNT |
|---|---|---|---|
| Model 64 automatic rifles | 5,100 | 5,100 | 729 |
| Model 62 machine guns | 51 | 51 | 92 |
| Machine guns for Model 74 tanks | 38 | 38 | 92 |
| 84mm recoilless rifles | 200 | 188 | 395 |
| Model 74 MAT | 4 sets | 4 sets | 75 |
| Model 79 Ju (Heavy) MAT | 9 sets | 8 sets | 472 |
| Model 64 81mm mortars | 65 | 65 | 162 |
| Model 75 155mm HSPs | 34 | 26 | 6,944 |
| Model 75 130mm SSRs | 9 | 8 | 1,520 |
| Model 75 wind measuring equipment | 3 | 3 | 332 |

| ITEM | ORIGINAL REQUEST | APPROVED | AMOUNT |
|---|---|---|---|
| L-90 AA machine guns | 1 set | 1 set | 646 |
| Model 74 tanks | 60 | 60 | 19,739 |
| Model 73 APCs | 9 | 9 | 891 |
| Model 78 tank recovery vehicles | 6 | 3 | 729 |
| Model 78 snow vehicles | 30 | 22 | 506 |
| Model 70 self-propelled pontoons | 2 | 2 | 285 |
| Total : | | | ¥33,608M |

* Naval shipbuilding

(Unit: ¥1 million)

| Ship Type | Number | FY '80 Expenditure | Follow-on Balance | Total |
|---|---|---|---|---|
| 2,900-ton DD destroyers | 2 | 1,775 | 62,614 | 64,389 |
| 1,400-ton DE frigate | 1 | 692 | 15,921 | 16,613 |
| 2,200-ton SS submarine | 1 | 834 | 28,758 | 29,592 |
| 440-ton MSC minesweepers | 2 | 199 | 8,304 | 8,503 |
| sub-total | 6 | 3,500 | 115,597 | 119,097 |
| Auxiliary ships | 3 | 353 | - | 353 |
| Total : | 9 | 3,853 | 115,597 | 119,450 |

CSO: 4120

MILITARY

DEFENSE TECHNOLOGY SOCIETY ORGANIZED

Tokyo JPE AVIATION REPORT-WEEKLY in English 6 Feb 80 pp 4-6

[Text]

The first Japanese "think tank" for development of defense technology was organized January 23 as "Boei Gijutsu Kyokai" (Defense Technology Society), a non-profit organization sponsored by eight defense-related civilian organizations. The sponsoring organizations included Keidanren (Federation of Economic Organizations), Japan Ordnance Association, Society of Japanese Aerospace Companies (SJAC), Japan Shipbuilders Association and four other defense related civil organizations.

At the first general meeting held in Tokyo, Soichiro Honda, founder of Honda Motor Co., was elected chairman. Futoshi Ibuka, founder and presently honorary chairman of Sony Corporation, was elected senior advisor. Three other advisors include Takashi Maruyama, former Administrative Deputy Minister for Defense, Gen. Takehiko Takashina, former Chairman of the Joint Staff Council, and Lt, Gen. Yoshio Nagamori, ex-Assistant Director-General for Aircraft Development, TR&DI.

Fifteen directors were also elected as the working force of the "defense think tank," assisted by members of the sponsoring organizations. The society's capital of ¥35 million will be furnished by the participating organizations.

Activities of the Defense Technology Society, according to the prospectus, will be divided into the following five areas:

1) Planning for general research work related to development of defense technology. This includes a) feasibility studies up to fabrication of experimental models, b) studies on what future defense equipment should be, c) support projects for selected defense-related technical R&D programs, d) research on future technical and operational requirements for defense, e) planning for research on trends in defense technology in the world, and f) collection, analysis, and introduction of data and information on defense technology.

2) Exchange of defense-related technology between defense officials and civilian engineers. This will call for joint seminars and meetings by specialists in defense, industrial and academic circles.

3) Promotion of defense R&D efforts, through such measures as overseas trips and recongnition of significant achievements in development of defense technology.

4) Publication of an organ and holding of lecture meetings. Lecture meetings will be held on selected areas of defense technology. The society will also serve, on request, as a consultant on defense technology.

It will also handle sales of the NTIS, a US publication on defense technology reports and books.

5) Technical service to TR&DI, JDA. This will include a) collection, analysis, and cataloging of specific data and information preliminary to planning of R&D projects, and provide assistance to technical experiments and tests through such services as measurement data integration and analysis.

The society plans to file an application with the Prime Minister's Office before the end of February to obtain authorization as a legal entity.

CSO: 4120

MILITARY

## ASDF TO PURCHASE 87 AIM-7F AAMS FOR F-15S IN FY '80

Tokyo JPE AVIATION REPORT-WEEKLY in English 6 Feb 80 p 10

[Text]

The ASDF has been authorized to purchase 87 new AIM-7F Sparrow AAMs for F-15 jet fighters, 194 AIM-9L and 25 ASM-1 AAMs in FY 1980 starting in April.

However, its request for 30 AIM-7E AAMs for F-4EJ fighters was rejected. This will allow the type of Sparrow missiles for the ASDF to eventually shift from the 7E to the 7F. The ASDF originally requested 150 AIM-7F AAMs, including 20 for tests with F-15s. The authorized 87 involve 10 for the test. The 194 AIM-9L AAMs also include 30 for experimental operations. An original request regarding this type totaled 600. The authorized figure of 25 for ASM-1 AAMs compares with 62 as originally requested. These missiles will be installed on F-1 jet fighters.

CSO: 4120

## JOINT JAPAN-U.S. ARMS DEVELOPMENT AGREEMENT SUGGESTED

Tokyo JPE AVIATIO. REPORT-WEEKLY in English 13 Feb 80 pp 5-6

[Text]

The Defense Production Committee of Keidanren (Federation of Economic Organizations) has decided to submit a proposal to the National Defense Council for Japan-United States cooperation in joint arms development. The committee has been considering Japan-U.S. joint development of cruise missiles and precision guided missiles (PGM), which the Japanese Defense Agency (JDA) is giving priority in modernization. Some Japanese heavy industrial and electronics firms have started informal talks with U.S. weapons manufacturers on possibility of joint arms development.

However, joint arms development, which would almost force Japan to export sophisticated electronic parts to the United States, may void the spirit of Japan's arms export ban policy. The proposal will at least cause extensive debate. But, the Keidanren committee intends to challenge the policy, which it charges has delayed development of Japan's military technology. It expects no strong protest against the proposal because the planned agreement would never bring about export of finished weapons and is not designed for cooperation with communist countries and parties involved in armed conflicts.

The JDA's arms R&D expenses have accounted for only one percent of Japan's total defense budget, compared with around 10 percent in the U.S. and Europe, resulting in a delay in modernization. As for mainline fighters, P3C antisubmarine patrol aircraft and other major defense equipment, Japan has been producing them under American license. However, the U.S. military industry has become increasingly reluctant to supply Japan with sophisticated weapons technology. In case of the F-15, U.S. firms plan to export finished components to Japan without releasing advanced technology. This has discouraged Japanese manufacturers, who want to obtain advanced technology through license production.

Some time ago, Australia and Brazil proposed joint development of military equipment with Japan. Although Japan rejected these proposals using as a reason the arms export ban policy, the Japan-U.S. agreement, if actually concluded, would lead to similar arms cooperation with other countries, a Keidanren spokesman says.

The Keidanren committee has chosen the U.S. as a partner for joint arms development because a major military power's cooperation is seen necessary in using Japan's advanced electronic technology. The U.S. for its part seems to hope for joint arms development with Japan as revealed by Defense Secretary Harold Brown, who recently said the U.S. expects Japan's military power to contribute to security in the Far East. Furthermore, the two countries have been exchanging technical data about weapons under the bilateral military technology information exchange accord signed in 1962.

CSO: 4120

## FIRST P-3C DELIVERY TO MSDF EXPECTED IN 1981

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 pp 6-7

[Text]

Delivery of the Lockheed P-3C Orion antisubmarine patrol aircraft to the MSDF is expected to begin in 1981, with three US-built aircraft. The delivery schedule for these three has improved slightly, according to sources, from one each in June, July and August. The first aircraft will be delivered in April, followed by one each in June and August at the Lockheed Burbank Plant. The three are part of the first P-3C procurement contract placed in FY 1978 covering eight aircraft including five to be assembled locally.

The MSDF plans to use the first three P-3C aircraft for training of flight and maintenance crews at the Moffet Naval Air Station, California, until November 1981. In December, they will be ferried to Japan by Japanese crews for service entry with the MSDF 51st Squadron.

Delivery schedule of the five P-3Cs to be produced locally call for one each in May, July, and November 1982 and in January and February 1983. All will be assigned to the 51st Sq. The MSDF is authorized to procure 45 P-3C aircraft over FYs 1978-88.

CSO: 4120

MILITARY

## UP-2J TARGET-TOWING AIRCRAFT TO BE DELIVERED SOON

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 p 7

[Text]

The first UP-2J target-towing aircraft of the MSDF will be delivered in March 1980. Based on the P-2J antisubmarine patrol aircraft, the UP-2J is intended to replace the Grumman S2F-1U utility aircraft in target-towing roles.

The first UP-2J ordered from KHI in FY 1977 (conversion of a P-2J) was to have installed a missile seeker simulator and other devices for towing Firebee target drones. Three more UP-2Js will be ordered by the MSDF including two during FY 1980. One will be an electronic jamming aircraft and the other an ELINT (electronic intelligence) type. In FY 1981, the MSDF plans to order a second ELINT type.

Replacing four S2F-1Us, the MSDF will thus have two UP-2J target-towing aircraft and two ELINT types by FY 1982. The two target-towing aircraft are planned to be further converted as mother ships for air-launched high speed target drones.

CSO: 4120

## GSDF AH-1S AVIONICS PLANNED FOR LOCAL PRODUCTION

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 pp 7-8

[Text]

While finalizing plans for start of full-scale procurement of the Bell AH-1S antitank helicopter in FY 1981, the GSDF appears considering placing advanced avionics to be used on the helicopter in local production. The TOW-Cobra helicopter is fitted with advanced electronic equipment not locally available nor in use with other GSDF aircraft types.

Items considered for local production include a Hughes Aircraft TMS (tactical missile system), a laser rangefinder, a Garrett IR (infrared) suppression system, a Kaiser HUD (head-up display), a Teledyne FCS (fire control system), and a Marconi Avionics ADS (airborne data system). Some manufacturers of these items already have business ties with Japanese companies on other products.

Two AH-1S helicopters the GSDF ordered for evaluation purposes carry Step II avionics but it is likely that the GSDF will want its AH-1S helicopters for operational service to have Step III advanced avionics aboard.

The first GSDF AH-1S is to complete tests at the end of March 1980. From April, it will be joined by a second helicopter for tests on formation operation. The results of these tests will provide data for GSDF planning to establish 3.5 antitank helicopter squadrons during the FY 78 Medium-Term Defense Program, FYs 1980-84.

CSO: 4120

MILITARY

MODIFIED F/M3D RADARS AUTHORIZED FOR FY '80

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 p 8

[Text]

The Finance Ministry has authorized appropriations for the Defense Agency's purchase of modified F3D and M3D radars to be included in the FY 1980 (April 1980-March 1981) budget draft.

However, appropriations for the F3D have been reduced to ¥2,182 million from the originally-requested ¥2,257 million, and for the M3D ¥1,306 million from ¥1,397 million. The F3D, the third of its kind, will be installed at Nemuro radar site of the Air Self-Defense Force (ASDF). Two similar radars were introduced in FY 1977 and 1979. The second M3D following one purchased in FY 1978 will be deployed in Okinawa.

As for procurement, the FY 1978 Medium-Term Defense Program provides continuous purchase of four to six sets for each as part of the ASDF's modernization of its air defense and warning setup after the 4th Defense Buildup Program ended in FY 1976.

Meanwhile, new radars are expected to be developed to replace the existing FPS-20 and FPS-6 radars at ASDF sites. The ASDF is likely to seek fabrication of an active phased array radar or other new radars under a FY 1981 budget. Operation of new radars is expected to start in FY 1985 or 1986.

CSO: 4120

MILITARY

## U.S. NAVY TEAM IN JAPAN FOR ASDF E-2C INTRODUCTION

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 pp 3-4

[Text]

A U.S. Navy team is believed to have acknowledged Japan's set up for introduction of the E-2C airborne early warning aircraft from Grumman Corp. is prepared better than expected.

The team, comprising 39 members including Grumman engineers, arrived in Japan Jan. 21 to discuss logistical support of the E-2C with the ASDF and visit expected E-2C deployment bases and supply and maintenance facilities until the end of February. It has already visited the ASDF Misawa Air Base, service schools and other ASDF facilities as well as designated E-2C repair and overhaul shops -- KHI, IHI, Sumitomo Precision, Toshiba and Tokyo Keiki -- for collecting data.

The American team started discussions with ASDF leaders last week to prepare recommendations on E-2C logistical support and other matters concerned. However, it is said to have found no problems in Japan's E-2C introduction arrangement.

CSO: 4120

## SERVICE LIFE EXTENSION PLANNED FOR ASDF PHANTOMS

Tokyo JPE AVIATION REPORT-WEEKLY in English 6 Feb 80 p 10

[Text]

Following authorization of funds for FY 1980, the ASDF now plans to start a program for extension of service life of the McDonnell Douglas F-4EJ fighter. Two ASDF specialists will be sent to the US this year to make preparations for introduction of the ASIP (aircraft structural integrity program) of the USAF in FY 1981.

The computer-assisted program will enable ASDF to determine the precise service life of individual Phantom aircraft which currently make up six of the ten ASDF front-line squadrons. After the ASIP checkout, the ASDF will proceed with modification programs to extend service life and upgrade performance of the F-4EJ as a front-line fighter. Six F-4EJ squadrons will be operating with four F-15 squadrons by 1985 but a Phantom squadron will be deactivated in late '80s due to structural limits.

Modification of the F-4EJ will include improvement of the fire control system through addition of "look down" capability using such advanced technology and hardware as used for the APG-66 system on the General Dynamics F-16. Other modifications will be made to allow the Phantom to carry and fire advanced AAMs such as the AIM-7F Sparrow and the AIM-9L Sidewinder common to the F-15.

While the ASDF is striving to get authorization on increased production of the F-15 from current 100 to 123 aircraft to cover service withdrawal of an F-4E squadron, introduction of the ASIP will allow more flexibility in ASDF planning to maintain its authorized strength of 10 fighter squadrons.

CSO: 4120

MILITARY

## MSDF TO TRAIN 200 P-3C CREW MEMBERS IN U.S.

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 6

[Text]

The MSDF plans to train 200 crew members for its P-3C antisubmarine partol aircraft during the three years, FYs 1979-81 in the US. Of the 200; 50 are pilots, 50 are electronic equipment operators, and 100 are support and maintenance personnel.

The first group of fifty electronic equipment operators left Japan in late January. The group will receive training on airborne electronic equipment as well as ground support systems such as the PGC/SDF and the TSC for about two years until February 1981 when the first three P-3Cs will be delivered.

During FY 1980, about eighty support and maintenance personnel will be sent to the US. About seventy people including fifty pilots will be sent in FY 1981. According to MSDF planning, training of all of 200 will be completed before ferrying of the first three P-3Cs to Japan.

CSO: 4120

MILITARY

## ASDF FINALIZING BASE DEFENSE REQUIREMENTS

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 4

[Text]

The ASDF will soon draft a plan for deployment of portable and short-range SAMs for enhanced air base defense in an apparent bid to earmark funds for the project in the FY 1981 (April 1981-March 1982) budget request.

It is considering establishing an air base defense system comprising these SAMs and 20mm machine guns as the FY 1978 Medium-Team Defense Program (MTDP) for FY 1980-84 stipulates reinforcement of air defense power around ASDF air bases.

In the planning, the ASDF sent a survey mission to the United States and Western Europe last fall to obtain data for selection of suitable short-range and portable SAMs. Short-range SAM candidates under consideration include the Tan-SAM of Japanese development, Roland, Rapier and Crotale. Portable SAMs being studied include such missiles as the Stinger, Blowpipe and the RBS70.

As for the 20mm machine gun, four units were purchased from the U.S. through the FMS (foreign military sales) channel in FY 1979 for operational evaluation.

CSO: 4120

MILITARY

## ASDF CONTINUES TESTS ON ASM-1 MISSILE

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 4

[Text]

Following operational tests scheduled for completion by the end of March, the ASDF plans to continue tests on the ASM-1 air-to-ship missile in FY 1980 in the form of "in-service" tests with F-1 operational squadrons. About ¥3,500 million is included in the FY 1980 budget draft for the "in-service" tests.

This is different than usual approach to new equipment of the ASDF. Usually new equipment is adopted as a standard item immediately following successful conclusion of operational tests. The first Japanese ASM has proved itself through current tests, but the ASDF wants to place it in service evaluation tests during FY 1980 so that there will be no problems when it enters operational service in FY 1981.

CSO: 4120

MILITARY

## GSDF TO DISPATCH TECHNICAL SURVEY MISSION OVERSEAS

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 5

[Text]

The Ground Self-Defense Force (GSDF) has decided to send a mission overseas in FY 1980 starting in April to study foreign military technology.

Annual GSDF technical survey missions abroad have so far covered almost all kinds of weapons systems, such as missiles, aircraft, ground installations, communications and electronic equipment, antiair and field artillery, leading to adoption of new arms and promotion of weapons development projects.

A main subject of the FY 1980 overseas survey, though not released, is presumed to be antiair arms, especially self-propelled antiaircraft (AA) guns or AA tanks, since the TR&DI has been proceeding with research and fabrication of the new AW-X self-propelled AA gun. The antiair tanks are designed to counter airborne attacks against armored units.

Under the AW-X project, the TR&DI has purchased an Oerlikon KDA from Switzerland and plans to install the gun and related equipment on a Model 61 tank in FY 1980. This will be followed by functional tests in FY 1982 in order to finalize technical evaluation.

Another purpose of the FY 1980 overseas survey will include preparatory work for finalization of the AW-X technical development.

CSO: 4120

MILITARY

## GROUND DEFENSE CH-X SELECTION PLANNED IN FY 1981

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 5

[Text]

Following the AH-1S antitank helicopter program, the GSDF plans to proceed with the CH-X program to replace the V-107A transport helicopter. Procurement of two CH-X large transport helicopters has been authorized in the FY '78 MTDP and the GSDF plans to place an order in FY 1982 calling for delivery in 1983.

To meet this schedule, therefore, the GSDF plans to send a survey mission overseas in FY 1981 for selection of the type during that year.

Although it is unofficial, the GSDF is reported to be leaning toward the Boeing-Vertol CH-47 Chinook helicopter for the CH-X. In any event, the first order for two units of the CH-X will be placed in FY 1982 and the full-scale procurement program will be included in the FY '81 MTDP for commencement in FY 1984.

Basic requirements for the CH-X include higher mobility, longer range, and larger payload compared to the V-107A currently in service.

CSO: 4120

## BRIEFS

ENGINE SELECTION FOR DDF--Following adoption of gasturbine engines on DDs and DEs, the MSDF plans to adopt similar engines on new DDGs to be built during the FY '78 MTDP. It is expected an all-gasturbine powerplant will be selected by the end of FY 1980 or before the end of March 1981 so the MSDF will be able to seek funds in its FY 1981 budget request. At present two powerplant configurations are being studied by the MSDF. A combination of the Rolls-Royce Olympus and Spey engines and a modification of the General Electric LM2500 engine are being scrutinized. [Text] [Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 p 8]

CSO: 4120

ECONOMIC

MHI LANDS POSITION ORDERS FOR 85 MU-300S

Tokyo JPE AVIATION REPORT-WEEKLY in English 6 Feb 80 p 3

[Text]

MHI had received position orders for 85 MU-300 Diamond-1 business aircraft mainly through its American subsidiary Mitsubishi Aircraft Int'l (MAI) by the end of December 1979.

It decided on June 1, 1979, to market the MU-300 now under tests. The position orders mostly from the United States will be converted to firm orders some time in 1980. The MU-300 is priced at $2,180,000 or a total ¥520 million in position orders.

Two experimental MU-300 aircraft have already been sent to MAI for tests in the United States. Fatigue tests are under way in Japan. MHI plans to receive a type certificate from the U.S. Federal Aviation Administration (FAA) for the MU-300 in the summer of 1980 and then from the Japanese Ministry of Transport. Delivery of production aircraft will begin in early 1981.

CSO: 4120

## AUSTRALIANS PROPOSE JOINT MILITARY TRAINER DEVELOPMENT

Tokyo JPE AVIATION REPORT-WEEKLY in English 6 Feb 80 p 4

[Text]

The Australian aircraft industry, it has been learned, proposed to the Japanese a joint development program for a new military trainer. The proposal was made to representatives of SJAC (Society of Japanese Aerospace Companies) who visited Australia recently. The Royal Australian Air Force has requirements for a new trainer and both the RAAF and the Australian aircraft industry are interested in joining efforts with the Japanese industry to develop a trainer that will satisfy requirements of both the RAAF and the ASDF, sources report.

Since the Australian aircraft industry is largely state-owned, SJAC intepreted the proposal as an indirect approach by the Australian government. The Australian interest in the ASDF MT-X project, planned for a start in FY 1981, therefore, was given to JDA.

This was the second time that the Japanese industry was approached on joint efforts for military aircraft. Brazil several years ago sought a joint program for a turboprop military aircraft.

"We have had no formal proposal from the Australian government," said a JDA spokesman. He added, however, that "joint efforts are common practice in Europe for development and production of fighters and trainers." "Through international collaboration, low-cost and highly advanced aircraft can be developed," he pointed out.

SJAC is currently contacting member companies about the proposal, while awaiting action by JDA. Export of weapons is not authorized in Japan in principle.

CSO: 4120

## SJAC MISSION TO VISIT EUROPE IN APRIL

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 pp 2-3

[Text]

The Society of Japanese Aerospace Companies (SJAC) plans to send a fact-finding mission to Europe for about two weeks in early April to collect data about the European industry and their aircraft development projects.

The plan was approved at a Jan. 29 meeting of the Policy Subcommittee, Aircraft Division, Aircraft & Machinery Industry Council, Ministry of International Trade and Industry (MITI). It was introduced at the session when Director Noboru Hatakeyama of MITI's Aircraft & Ordnance Section explained on-going studies about a project for developing a new aircraft following the YX and foreign countries' plans for developing 130-seat class passenger aircraft.

Subcommittee Chairman Prof. Hidemasa Kimura, responding to the explanation, requested SJAC to submit a report of the fact-finding mission to the subcommittee later.

The SJAC team will comprise scholars and representatives from aircraft and engine manufacturers, airlines, aircraft equipment makers and ERAAE as well as SJAC. It will confer with officials and aerospace manufacturers of Britain, France, West Germany, the Netherlands, Italy and Spain. The mission is not designed to select candidate aircraft or partners for Japan's possible international collaboration programs in post-YX aircraft.

At the subcommittee meeting, Hatakeyama also briefed attendants on aircraft industry-related draft budgets for FY 1980 starting in April. Kimura expressed satisfaction with the draft.

* Subcommittee briefed on international programs and proposals

MITI's Hatakeyama briefed the Policy Subcommittee on an outline of 130-seat class aircraft development projects of Fokker Aircraft Co., Airbus Industrie and Boeing Co.

Chairman F. Swarttouw of the Dutch aircraft maker visited Japan several times in 1979 and requested Japanese aircraft manufacturers to participate in its development of the F29 transport. The 130-seat, twin-jet F29 with a range of about 2,800 kilometers is designed to obtain a type certificate in the middle 1980s. Boeing has reportedly agreed to supply 737 fuselages to Fokker for its F29 aircraft. Calling for Japan's participation in the program, Fokker has proposed Japan, the Netherlands and the United States have equal work shares. Specifically, it has suggested Japan take charge of the wings in the program.

Airbus Industrie has approached Japan on participation in its SA-1 and SA-2 projects. The SA-1 is planned to have 110 to 130 seats and the SA-2 about 160 seats. It will take about two years to study the technical feasibility of the projects and marketability of the new aircraft. The European consortium has suggested Japan have a 25 percent share.

Boeing has been reportedly considering reengine and partial airframe modification of the 115-seat 737. A modified version would have about 120 seats. However, if the wings are modified, it would have more seats. Although Japan's participation in the 737 modification program seems possible, Boeing has not invited Japan to participate.

CSO: 4120

ECONOMIC

## RB432/XJB JOINT DEVELOPMENT AGREEMENT BECOMES EFFECTIVE

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 p 4

[Text]

The agreement signed in December 1979 between Rolls-Royce Ltd. and three Japanese aero engine manufacturers---IHI, KHI, and MHI--on joint development of the RB432/XJB advanced commercial fanjet became effective Jan. 31. The government approved a cross license agreement for the development program dated January 29, following authorization of an ¥1,785 million subsidy to the Japanese signatory companies for FY 1980 in late December. These were required "arrangements" to put the Anglo-Japanese agreement in force. Government approval of the cross license agreement was given to Rolls-Royce Jan. 30.

The Japanese companies plan to send a joint mission to the British firm shortly to discuss details of preparations to start the program in FY 1980 beginning April 1. Preparatory work is under way, on the other hand, for inauguration of a joint venture company tentatively called "Rolls-Royce Japanese Aero Engines Limited." The company will be established to coordinate development, production, sales, and product support activities.

The planned capital of 2,000 pounds will be equally invested by British and Japanese companies for the joint venture whose head office will be located at Rolls-Royce's Derby facilities. Five board directors each will be sent from both parties. The Japanese board members will probably include Osamu Nagano, advisor to IHI, Kaneichiro Imai, IHI managing director and head of the Aeroengine & Space Development Div., Hitoharu Tsukamoto, KHI managing director and head of the Engine Development Div., Kenji Ikeda, MHI managing director and head of Aircraft & Special Vehicles Development Div. Another Japanese member will be selected outside the industry.

CSO: 4120

ECONOMIC

FOKKER CHAIRMAN HERE FOR F29 JOINT DEVELOPMENT PROPOSAL

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 pp 4-5

[Text]

Chairman Francois Swarttouw of Fokker Aircraft Feb. 4 began visiting Japanese government offices and aircraft manufacturers in Tokyo in his latest efforts to obtain Japanese participation in the F29 jetliner development project. His visit, the fourth since February 1979, is aimed at obtaining at least a Japanese commitment to the Fokker project, says Swarttouw. He elaborated to the effect that Fokker would be satisfied with a Japanese promise for a joint effort at this time even if actual work does not start immediately.

Fokker has reportedly started basic designing of the F29 and detail designing is scheduled to start in May 1981. Sales of the F29 is projected at 500 aircraft of the 1,500 jetliners in its category in worldwide demand during 1985-93. As revealed during his visit in November 1979, the F29 joint development program calls for participation of Boeing Commercial Airplane Co. for the fuselage and the Japanese for the main wing, with Fokker responsible for the flight deck and control systems.

It is uncertain how the Japanese industry will react to Fokker's materialistic proposal. The atmosphere in the industry, however, is not conducive to serious consideration. It is at present occupied with the Y-X (Boeing 767) joint development and production program for which a large sum is required. Although a survey mission from the industry is to visit Europe in April, it will be a year so before the industry reaches a concensus regarding the Fokker, or, for that matter, any proposals on the Y-XX.

CSO: 4120

ECONOMIC

QUEENSLAND PREMIER TO OPEN TOKYO TRADE OFFICE 19 FEBRUARY

OW140745 Tokyo KYODO in English 0724 GMT 14 Feb 80 OW

[Text] Tokyo, 14 Feb (KYODO)--Joh Bjelke-Petersen, premier of the Australian state of Queensland, will formally open his government's Tokyo office on February 19 during a week-long visit to Japan, the Australian Embassy said Thursday.

Queensland supplies nearly half of Japan's beef imports, sugar and much of its coal and bauxite.

It is the fourth Australian state to open a representative office in Tokyo. The others are New South Wales, Victoria and Western Australia. South Australia is represented by a commercial agent.

The new Queensland office will be located in the Yuraku-cho Denki Building. The state government's commissioner will be Rex Breaden.

Bjelke-Petersen will be accompanied at the opening by three of his government's senior ministers, L. R. Edwards, deputy premier and treasurer, R. E. Camm, minister for mines, energy and police, and V. B. Sullivan, minister for primary industries.

Bjelke-Petersen will arrive in Tokyo Sunday.

The premier said before departing Australia for Japan that Queensland's vast natural resources and Japan's industrial needs had already forged complementary links as trading partners.

The new Queensland government office would encourage further trade relations to satisfy mutual needs. But it would also stimulate closer social, cultural, commercial and tourist associations.

He said the Pacific basin was fast becoming the world's most dynamic economic region. It was relatively stable in comparison to other parts of the world and could look with confidence to mutual prosperity through cooperation.

CSO: 4120

ECONOMIC

JAPAN, PRC TRADE HIT RECORD HIGH IN 1979

OW150727 Tokyo KYODO in English 0700 GMT 15 Feb 80 OW

[Text] Tokyo, 15 Feb, KYODO--Sino-Japanese trade hit a record high in 1979 with the volume topping $6.6 billion, up 31 percent over the previous year, the Japan External Trade Organization (JETRO) said Friday.

The semigovernmental trade promoting agency said Japanese exports to China exceeded $3.7 billion, up 21.3 percent, and Japanese imports from China $2.9 billion, up a whopping 45.5 percent. Both were records.

Japan's trade surplus with China shrank to $743 million from $1 billion in 1978.

JETRO noted that the trade volume rose sixfold over the seven years since diplomatic relations were established between the two countries, an average annual increase of 29 percent.

For Japan, China ranks seventh as a customer and 10th among suppliers with shares of 3.6 percent and 2.7 percent, respectively.

On the other hand, Japan is China's top trading partner, buying 23 percent of its exports and providing 21 percent of its imports.

Japanese steel sales to China fell to 4.5 million tons from 5.6 million tons in 1978, with the share dropping to 46.7 percent from 55.4 percent.

Exports of machinery and equipment, on the other hand, rose to $1.1 billion with the share rising from 20.9 percent to 30.7 percent.

Sales of chemical fertilizer increased in value due to price increases.

In the other direction, Chinese crude oil deliveries to Japan dipped to 8.5 million kiloliters from 8.7 million kiloliters in 1978, but their value rose to $1 billion from $758 million in 1978 due to six price markups in 1979.

Chinese exports of other items rose by 69.3 percent, while the increase was 42.6 percent in 1978.

As for 1980, JETRO said Japanese exports of machinery and equipment of China will continue to increase but it will be difficult for steel to recover the level of 5 million tons. Chemical fertilizer shipments will level off.

With preferential duties to be applied to China in fiscal 1980, that country will gain price competitiveness for high quality carpets, footwear, gloves, clothing and sundries.

The value and volume of crude oil transactions will depend on future prices, but other items will increase 40 percent, JETRO added.

CSO: 4120

ECONOMIC

JAPAN, ARAB COUNTRIES HOLD TOKYO ENERGY CONFERENCE

OW190853 Tokyo KYODO in English 0704 GMT 19 Feb 80 OW

[Text] Tokyo, 19 Feb, KYODO--Japan and Arab countries opened a two-day conference on electricity and energy here Tuesday with about 50 persons including Arab ministers and Japanese experts taking part.

Attending at the conference were Ahmad 'Umar Yusuf, minister of electricity of Syria, Hamid Nasir al-'Uways, minister of electricity and water of the United Arab Emirates; and representatives from Bahrain, Jordan, Kuwait, Oman, Tunisia and Yemen Arab Republic as well as from the Organization of Arab Petroleum Exporting Countries (OAPEC).

Also present were Gaishi Hiraiwa, chairman of the Federation of Electric Power Companies (FEPC), and Sohei Nakayama, chairman of the Japan Cooperation Center for the Middle East (JCCME) as well as government officials.

The conference, sponsored by FEPC, JCCME, OAPEC and other organizations, was designed to discuss possible technology transfer from Japan to Arab countries which have put priority on electric generation to build infrastructure for their economic development.

At the conference, Hisham al-Khatib, senior engineer of the Arab Fund for Economic and Social Development who reported on electricity in the Arab world, said the Arab region supplied the world with an estimated 1,074 million tons of oil equivalent of primary energy in 1979, 15.6 percent of the world's total requirements, while it produced only an estimated 80,500 gwh of electricity, 1 percent of world production and less than 14 percent that of Japan's.

With expected high growth of demand for electricity in the region, it is estimated that the total Arab electricity production will amount to 516,000 gwh by 2000, 6.4 times that of 1979, he said.

He added that about $150 billion in investment will be necessary between 1980 and 2000 to attain this production.

Combined power generation with water desalination to meet the shortage of water would be the most favorable type of electric power plant for the region, he added.



CSO: 4120

ECONOMIC

FOKKER BEGINS SECOND PHASE OF F29 DEVELOPMENT PROGRAM

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 pp 1-3

[Text]

H.F. Swarttouw, Chairman of Fokker Aircraft Co., told a press conference in Tokyo February 8 that the Dutch company has begun engineering design and program definition of the F29 project. Fokker has been approaching Japan for joint development of the 130-seat passenger jet by merging with Japan's new commercial aircraft program tentatively coded the Y-XX. Swarttouw stressed that the company has studied international cooperation for years, and that Japan and the Netherlands are in a stronger position than ever in the field of aircraft development.

Despite Fokker's stepped up efforts to obtain Japan's participation in its project, there appears to be a considerable difference between the development time schedules of the F29 and those of the Japanese Y-XX. Swarttouw, however, told the press that the company is in contact with Boeing and Airbus Industrie on future aircraft programs, and that the Fokker's project is still "flexible."

After Swarttouw's introductory statement, J. Cornelis, executive vice president, told reporters that there are four phases in the F29 project, and that Fokker completed the initial conceptual design phase before the end of last year. The second phase -- engineering design and program definition began this January. It will be completed by the middle of 1981, followed by the third phase calling for fabrication of prototype aircraft. The first flight of the aircraft is expected to take place in the latter part of 1983. The last phase -- flight testing and certification is scheduled to finish by the middle of 1985.

Fokker made an official proposal to Japan on joint development of the F29 last year and has started preliminary development work without any commitment by the Japanese. Asked to comment on this, Swarttouw replied the earlier Japan joins the more influence she will have. He added that Fokker plans to develop and produce a family of this aircraft.

It is not possible for the Japanese industry to promote the Y-XX program without government subsidies. In the present circumstances, however, it is probable that the government would not subsidize such a project before FY 1982. If Fokker proceeds on the F29 project along the present time schedules as explained by Cornelis, Japan would participate in the project after basic designing has been completed. The Japanese industry and the government have no intention to join any aircraft project in the middle of its development phase. They want to participate from the beginning. How to coordinate the time schedules between the F29 and the Y-XX still remains a major problem.

Asked about competition with Airbus Industrie's single-aisle aircraft project and Boeing's 737 improvement plan, Swarttouw said that Fokker has been approached by the European consortium on possible collaboration, and that discussions are still going on between the two European organizations. He also stated that his company is also in contact with Boeing Commercial Airplane Co.

"We may compete with either Airbus Industrie or Boeing, but we do not want to compete with both Airbus and Boeing, Swarttouw said. He added that the Dutch company is participating in the A300 and the A310 programs, and that there is a strong possibility the next decision Airbus will make will be on a stretched version of the A300, and not on a single-aisle aircraft.

Questioned about the difference of the development time schedules between the F29 and its proposed powerplant, the RB432/XJB engine which the Japanese industry and Rolls-Royce plan to develop, Cornelis replied, "We have been informed by Rolls-Royce that the engine manufacturers would be able to speed up development work so that it would meet the aircraft development schedule."

Fokker estimates total development cost of the F29 will amount to approximately $800 million. It hopes Japan will furnish about one third of this sum. It is asking Japan to share development of the main wings which will amount to 30 - 34 percent in terms of manhours, although this is still very flexible, Swarttouw said.

CSO: 4120

ECONOMIC

## ROLLS-ROYCE MAY SUBCONTRACT JAPAN FOR RB211 PRODUCTION

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 3

[Text]

Rolls-Royce Ltd. is expected to order RB211 engine modules for the Lockheed TriStar and Boeing 747 from Japan's IHI, KHI and MHI around the end of February on a trial basis, Japanese industry sources report.

The British engine manufacturer, producing more than 100 RB211 engines a year, is expected to purchase a large number of RB211 modules from the three Japanese companies over a long period if the trial proves successful, sources say. This may allow the Japanese companies to expand their engine production facilities substantially. Production and delivery of RB211 modules will start in 1981 at the earliest as preparation will probably continue for about one year.

Rolls-Royce has decided to place trial orders with IHI and KHI after evaluating the three firms' engine manufacturing facilities last summer, according to local industry sources.

The order is said to cover two parts of the engine. The Japanese firms will be required to assemble the No. 2 module of the compressor section and the No. 5 module of the turbine section, they add. KHI and MHI may take part in production of the engine parts to be assigned to IHI, which will be responsible for modular assembly and delivery to the British firm, Japanese sources report.

CSO: 4120

ECONOMIC

MITI REPORTS CRUDE OIL IMPORTS DROP IN JANUARY

OW211345 Tokyo KYODO in English 1145 GMT 21 Feb 80 OW

[Text] Tokyo, 21 Feb (KYODO)--Japan's crude oil imports in January fell by more than 10 per cent from the year-before level, the Ministry of International Trade and Industry (MITI) announced Thursday.

The output of fuel oil was also moderately lower than a year earlier. Reflecting the settling trend in demand, the sales volume of fuel oil sagged moderately from the like month of 1979.

According to MITI statistics, crude oil imports last month totaled 22,189,900 kiloliters, down 11.5 per cent from the year-earlier tonnage.

The ministry attributed the decrease chiefly to an appreciable decline in imports from Saudi Arabia, Japan's No. 1 supply source. Imports from Iran and Iraq made a good showing.

Imports from Saudi Arabia plunged 45.2 per cent from the year before, and its share fell to 21.1 per cent. The ministry attributed the plunge chiefly to ship congestion, and forecast that imports in February would make a good recovery.

Imports from Iran totaled 4,126,900 kiloliters, 3.3 times the year-before level. That was a reaction to low imports in January 1979, which, in turn, was caused by [the] Islamic revolution.

Crude oil consumption in the month totaled 24,358,100 kiloliters, down 4.5 per cent from a year before.

The output of fuel oil totaled 20,866,100 kiloliters, down 5.5 per cent. Mirroring strong demand for diesel oil, the product's output was up 13.1 per cent, whereas kerosene production fell 4.1 per cent as demand for the home-heating fuel passed its peak.

The sales volume of fuel oil totaled 21,277,000 kiloliters, down 4.3 per cent.

Gasoline sales increased 5.3 per cent and diesel oil 4.3 per cent, but this was due to the changed calculating formula. According to the previous formula, gasoline sales rose 1.9 per cent and diesel oil 2.6 per cent, MITI said.

The month-end stocks of fuel oil totaled 17,895,000 kiloliters, up 12.7 per cent from a year earlier and a comparatively high level. The stocks of the three distillate fuels, in particular, exceeded the year-before level by a wide margin.

CSO: 4120

ECONOMIC

MITI OFFICIAL SAYS AUTOMAKERS MUST BUILD PLANTS IN U.S.

OW231433 Tokyo THE JAPAN TIMES in English 22 Feb 80 p 5 OW

[Text] A senior official of the Ministry of International Trade and Industry (MITI) Thursday reiterated the necessity for Japanese automobile companies to make prompt decisions on the U.S. proposal for the construction of assembly plants in the United States.

"Any announcement by Japanese automakers that they will make direct investments there will contribute much to cooling off the mounting U.S. criticism against Japan's fast-growing small car exports to the American market," he noted.

Asked whether the U.S. threat to restrict imports of Japanese cars would remain unabated even if Japanese automakers should decide to build assembly plants there, the official, who asked to remain anonymous, said he thought otherwise.

The MITI official noted what appeared to be criticism even within the U.S. Government against American automakers whose failure to produce smaller cars has triggered "panic buying" by U.S. consumers of Japanese fuel-efficient small cars.

American public opinion will reflect the interests of consumers and foreign car importers, as well as those of the automotive industry and its trade union, he said.

CSO: 4120

ECONOMIC

GOVERNMENT TO DRAFT NEW MEDIUM-TI M ECONOMIC PROGRAM

OW230338 Tokyo KYODO in English 0246 GMT 23 Feb 80 OW

[Text] Tokyo, 23 Feb (KYODO)--The government is expected to begin drafting a new medium-term economic and social program soon, scrapping the one adopted less than seven months ago, government sources said Saturday.

The Economic Council, an advisory body to the prime minister, recommended revision of the seven-year (fiscal 1979-85) economic and social program adopted last August 10 in the light of changes in the situation since then.

Top officials of the Finance Ministry and the Economic Planning Agency, however, stress the need to completely revamp the program, contending that revision is not enough, according to the sources.

The government is thus likely to begin writing a new medium-term economic and social program soon after fiscal 1980 budget bills are approved by the Diet, the sources said.

It is rare in Japan that an economic program--the very basis of the nation's economic policy--is scrapped so soon after its adoption.

The scrapping of the fiscal 1979-85 program has been necessitated chiefly because introduction of a "general consumption tax"--a Japanese version of the European value-added tax--has become impossible after the ruling Liberal-Democratic Party's surprise setback in the October 7 general election, according to the sources.

The fiscal 1979-85 program assumed the new tax would be instituted in fiscal 1980, beginning this April 1, as the principal measure to put public finances back on a sound basis.

In addition, the sources noted, inflationary pressure has proved much stronger than predicted when the fiscal 1979-85 program was drafted

and the international oil supply situation has also undergone a much faster change.

The Finance Ministry is expected to draw up a medium-term fiscal program before the end of this year. The new medium-term economic and social program will likely dovetail with this new fiscal program, the sources said.

CSO: 4120

ECONOMIC

## BRIEFS

PRC STEEL CONTRACTS--Tokyo, 14 Feb--Japan's big-four steel pipe mills have contracted to supply 150,000 metric tons of seamless steel pipes to China for shipments in the first half (April-September) of fiscal 1980, mill sources said Thursday. These sources said the prices agreed on between the mills and the China National Metals and Minerals Import-Export Corp. are up 4-7 percent from those set for shipments in the latter half (October to March this year) of fiscal 1979. On order are oil well pipes, such as casing, tubing and drilling, plus boiler tubes, line pipes and stainless pipes. The four mills are Sumitomo Metal Industries, Ltd. (the world's top seamless pipe mill), Nippon Kokan K. K., Nippon Steel Corp. and Kawasaki Steel Corp. [Text] [OW142039 Tokyo KYODO in English 0430 GMT 14 Feb 80 OW]

TRAINING OF PRC EXPERTS--Osaka, 13 Feb--Hitachi Shipbuilding and Engineering Co. said Wednesday it would train Chinese technicians in Japan and also dispatch shipbuilding experts to China later this year as part of cooperation in modernization of the Dalian Red Flag shipyard in northeastern China. This disclosure was made by Hitachi Vice President Toshikazu Yuguchi, who has been named by the China Marine Industry Corporation as the first Japanese adviser to the corporation. Under present plans, he said, about 10 Chinese technicians will undergo technical training at Hitachi's Hiroshima shipyard around May while about four Hitachi shipbuilding experts will visit the Dalian shipyard, the biggest shipyard in China, around July. Hitachi had earlier agreed to cooperate in modernization of the Chinese shipyard. Apart from the cooperation in the modernization program, the Chinese corporation has also asked Hitachi to cooperate in construction of a 60,000-ton oil tanker and a 100,000-ton ore carrier, Yuguchi said. Hitachi plans to cooperate in construction of the ships on a commercial basis. [Text] [OW142039 Tokyo KYODO in English 1042 GMT 13 Feb 80 OW]

ACCORDS WITH HUNGARY, MANILA, UK--Tokyo, 14 Feb--Japan and Hungary signed in Budapest Wednesday a convention for avoidance of double taxation with respect to taxes on income, the Foreign Ministry said Thursday. The convention, to take effect one month after the exchange of instruments of ratification, lays down provisions for the avoidance of double taxation in respect to income of enterprises and income derived from international transport and investment. The ministry also said that a similar convention

was signed here on Wednesday between Japan and the Philippines. Foreign Minister Saburo Okita signed for Japan and Finance Minister Sesar E. A. Virata for the Philippines, the announcement said. It said Okita and Sir Michael Wilford, British ambassador to Japan, signed Thursday a protocol on amending the convention for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income. [Text] [OW142039 Tokyo KYODO in English 0142 GMT 14 Feb 80 OW]

AUSTRALIAN COAL CONTRACT--Tokyo, 13 Feb--Eight major Japanese steelmakers have reached a basic agreement with Central Queensland Coal Associates (CQCA) to conclude an eight-year contract on the import of Australian coking coal, Nippon Steel Corp. disclosed Wednesday. According to the agreement, the Japanese steelmakers will import 500,000 tons of coking coal from the Norwich Park coal mine in the first year of the contract term and 1.3 million tons each in the remaining seven years. The conclusion of the eight-year contract increases Japan's annual coking coal imports from CQCA to 10 million tons from 1981 onward because this country currently buys 8.7 million tons of coking coal a year from the Australian mining consortium under the existing contract with it. It is the first private-level long-term coking coal import contract to be concluded by the Japanese steel industry since a similar contract was concluded with American coal suppliers in 1975. [OW142039 Tokyo KYODO in English 1118 GMT 13 Feb 80 OW]

STEEL EXPORTS DECLINE--Tokyo, 16 Feb, KYODO--Japanese steel exports in December totaled 3.29 million metric tons valued at $1,617 million, according to the Japan Iron and Steel Federation. The tonnage represented at 29.7 percent gain from the previous month but was down 3.5 percent from a year before. It brought total exports for all of 1979 to 31.48 million tons, a slight 0.2 percent decline from the previous year, the Federation said. The year's shipments to the United States totaled 6.8 million tons, up 12.5 percent from 1978. [Text] [OW160406 Tokyo KYODO in English 0328 GMT 16 Feb 80 OW]

STEEL IMPORTS UP, EXPORTS DOWN--Tokyo, 19 Feb, KYODO--Japan's 1979 steel imports soared while its steel exports declined for the third consecutive year, according to the Japan Iron and Steel Federation. The imports of iron and steel products of all kinds in the past year totaled 2.54 million metric tons, up 85 percent from the previous year. The imports of general carbon steel products reached 908,000 tons, 4.2 times the 1978 level and in excess of one percent of Japan's domestic consumption. Imports of low- and medium-grade plate and hot coil (hot-rolled sheet in coil) from South Korea and Taiwan surged, according to the Federation. Imports from South Korea reached 514,000 tons, about six times the 1978 tonnage and from Taiwan 394,000 tons, some 11 times. Exports of iron and steel products of all types in 1979 totaled 31,496,000 tons, down 0.2 percent from the previous year. However, due to a 19 percent gain in dollar-based export prices and the yen's depreciation, the export value in yen terms reached yen 3.21 trillion, up 24 percent from the preceding year, the Federation said.

KANSAI TEAM FOR PRC--Osaka, 1 Feb--The Kansai Productivity Center will send a high-caliber mission to China in April to exchange views on productivity improvement. The 17-member mission being invited by China's Enterprise Management Association will be led by Seizo Yoshimura, president of the center and adviser to Kansai Electric Power Co. While in China 14-27 April, the mission will visit Beijing, Tianjin, Xian and Shanghai. They will also pay a visit to the association, ministry of foreign trade, and the China Council for the promotion of international trade as well as machinery, steel and spinning plants. The association was created last March as an offshoot of the State Economic Commission. [Text] [OW021413 Tokyo KYODO in English 0725 GMT 1 Feb 80 OW]

REFUGEE MISSION TO VISIT THAILAND--Tokyo, 22 Feb (KYODO)--The government will dispatch its second mission to Thailand Sunday to look into the needs of Cambodian refugees there. The 12-member team will be headed by Jutaro Sakamoto, director of the Foreign Ministry economic cooperation bureau's planning division. During the five-day tour the team will discuss with officials of the Thai Government and international organizations future cooperation in vocational and technical training, school education, public hygiene and child welfare, in addition to medical care and provision of drinking water. The first government team went to Thailand last November. On the basis of its report, three medical teams and a water works team were sent to the refugee camps. [Text] [OW230158 Tokyo KYODO in English 0152 GMT 23 Feb 80 OW]

CSO: 4120

SCIENCE AND TECHNOLOGY

## GEOTHERMAL DEVELOPMENT BEGUN IN EARNEST

Idemitsu Company

Tokyo DENRYOKU SHIMPO in Japanese Dec 79 p 136

[Article: "Idemitsu Jinetsu Kaihatsu (K.K.) to Start Geothermal Development"]

[Text] A comprehensive energy company has also been started in Japan. This firm is none other than Idemitsu Kyosan which from before the war weathered the rough seas of the oil industry and is presently at the stage of taking the measure of "western production." This company not only engages in oil prospecting and development but has now extended its arms to include substitute energy development.

One such project is the "Idemitsu Geothermal Development (Co.) (100 million yen capitalization, President Kiyomi Yamashita) which was founded in October of this year. Director Yamashita of the parent Idemitsu Company will assume the joint role of president of this company. This new company is an independent development arm of the New Fuel Department of the parent company in the area of geothermal development which has been working in cooperative manner with the Republic Geothermal Company of the United States (a geothermal development company). This company has hired the services of more than 10 American companies to conduct a basic survey of all Japan for geothermal sources.

This company has an objective of operating of 50,000-100,000 KW equivalent geothermal power plant as one of its objectives by 1985. Test borings will be initiated this fiscal year as a start toward this objective. Already 11 areas of Japan (total area about 10,500 $km^2$) have been surveyed by pictorial analysis utilizing the resources satellite Landsat, and high precision serial magnetic prospecting using remote sensing technology to perform the survey. Since November precise surveys have been under way using the most recent physical search technology such as Multibell aerial magnetic survey.

Test borings are expected to take place after the fall of JFY 1980, and any initial project aiming for 50,000-100,000 KW is certainly nothing to be sneezed at.

The government's geothermal development plan for the same time (1985) (long term provisional demand and supply prospects envision geothermal sources to supply roughly a million KW power) and Idemitsu's contribution should it materialize will be very large.

## New Participants

Tokyo DENRYOKU SHIMPO in Japanese Jan 80 pp 56-57

[Article: "New Participants and Diversity in Development Companies"]

[Text] Geothermal energy development is now basking in the footlights. This involves not only domestic efforts but inquiries and orders from abroad as well and encompasses activity in export of geothermal plants ticked for foreign sale to reassessment of the domestic geothermal power market.

When the subject of geothermal energy is mentioned, everybody knows that to this date Toshiba has been playing a lead role both at home and abroad. Toshiba presently produces 1.35 million KW power from geothermal sources which comes close to 50 percent of the total produced in the world. Recently, however, there has been hot pursuit on the part of Japan's heavy electrical makers who have issued a "wait for me" cry to this thus far essentially solo performance.

One of these is Mitsubishi Heavy Industries, Ltd. which has been making some spectacular advances. Since April 1978, Mitsubishi Heavy Industries has compiled the outstanding feat of snaring contracts for eight out of twelve foreign geothermal contracts Japanese makers signed. The geothermal plant put out by this company not only produces steam but hot water as well in a two stage utilization mode by the double flash cycle which is employed. This company is concentrating on markets in Kenya, the Philippines, and Mexico, and is putting forth great effort to secure a place for itself in the coming world market.

In another direction, Fuji Electric is also working on a two stage flash mode incorporating some corrosion prevention countermeasures and is going into all out efforts toward geothermal production in a manner not to be outdone by the preceding two companies. This company has received orders from El Salvador and northern California for power plants, and it has also succeeded in signing a contract for a power plant in Nicaragua. It is now said that "the three companies of Toshiba, Mitsubishi Heavy Industries, and Fuji Electric will be Japan's front" which will line up alongside makers from the United States and Europe to bid for geothermal plants in the international market.

In addition, Hitachi Limited has set out independently on geothermal power plant development and is participating in international bidding.

Back of these great efforts being put forth by the principal makers of Japan in this fight for the geothermal plant market is "IAEA has reached a concensus to ban oil fired power plants as a result of which orders in this area will be scarce from now on. This is why businesses dealing in the international market are making geothermal plants one of their stock items." This situation facing the makers is a prime reason for this great interest in geothermal plants. This condition in the overseas market is expected to continue for some time. At the same time, this situation is responsible for a reawareness of the Japanese geothermal power market in the country is often called "a country of volcanoes."

Reassessment Trends in the Country

In another direction, there is increasing trend to reassess the potential of geothermal power even in Japan itself. On the other hand, there have been some problems. One is that many of the potential geothermal power plant sites are found in the scenic settings of the national parks. These are also frequently associated with hot springs, and there would naturally be the expected opposition on the part of hot spring operators. On the other hand, the Tokyo summit conference placed a great deterrant to further oil import as a result of which the development of substitute energy must be given greater strength and acceleration, and geothermal energy became no longer exempt from all out exploitation.

Even the Environmental Agency which had been maintaining an attitude of absolute opposition to the promotion of geothermal development being championed by the Ministry of International Trade and Industry began to reflect this new attitude and is beginning to show a flexible stance. While it may not be said to be an all out conforming attitude, the agency is initiating a study on the evaluation of the effects of geothermal and thermal power plants on the environment. Contrasted to the opposition attitude of the past, it may be said that a survey now is being made in the same arena.

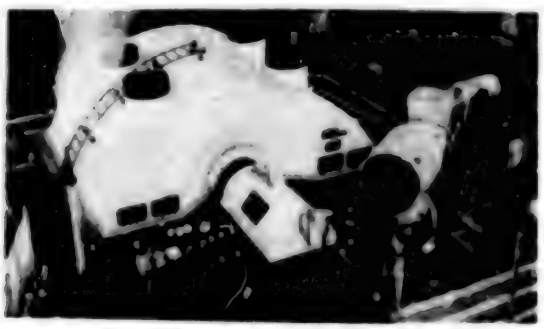
The feature of the power generation mode also can be cited in favor of geothermal power generation. Not only is it domestic energy produced solely by this country, but it is also blessed with a number of advantages. The first advantage is that the energy supply source is stabilized with a utilization rate of about 90 percent and very high. Maintenance and operating costs are low, and the power generation costs are relatively cheaper compared to other means of generating power.

One also cannot overlook the fact that the presence of geothermal energy warrants closer look because of its multiple purpose utilization. For example, the Matsukawa Geothermal Power Plant of Japan Metals and Chemicals takes steam from the production well to conduct heat exchange with spring water to produce 70°C hot water which is supplied to the nearby hotels and resort homes for heating and bathing use. This heat also is used for poultry husbandry (South Izu, Beppu) and melting snow off roads (Jozankei).

In this manner, the temperature differential is being exploited in many directions. There are movements among many local self governing bodies to push this source of heat for heating homes in very vigorous manner, and studies on the use of multiple uses of geothermal power generation have been initiated in Oita Prefecture and many other sites all over Japan.

On the other hand, this does not mean a completely rosy future for geothermal energy. In addition to the problem of harmony with the environment, Japan's makers rank with the best in the world in the matter of power plant production, but Japan is behind the western world in the matter of prospecting and drilling technology. There is need to close this gap even one day sooner. In this midst Idemitsu Kyosan is going into all out geothermal development as a strictly Japanese product, and it is employing the aid of Japan's first artificial satellite and aircraft survey to perform pictorial analysis and aerial magnetic surveys. In addition, Idemitsu has developed superior drilling technology from their oil field developments off the coast of Aga. It is expected that power companies, makers (for own use), and self governing bodies as well as new participants from other industries will participate in joint development of geothermal energy.

At the present time, Japan's geothermal power generation scale involves six plants with total production of 150-160 thousand KW, but the government is aiming for total production of one million KW by 1985. The promise of multiple utilization and activity in foreign areas is giving geothermal energy the expectations that it will become the "new energy business" that will make it the post oil thermal power plants.



Japan's Geothermal Plant Which Controls the Foreign Market

2267
CSO: 8129/0635

SCIENCE AND TECHNOLOGY

## FURTHER DEVELOPMENT OF ALQ-5, ALQ-8 ECMS AUTHORIZED

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 p 9

[Text]

The TR&DI has decided to carry out airframe modification design and partial fabrication of airborne equipment for the ALQ-5 electronic countermeasures (ECM) system and fabrication of the ALQ-8 ECM's main body in FY 1980 starting in April as part of the ASDF's ECM development program.

The ALQ-5 will be installed in a C-1 transport for ECM training against ground warning and control radars and antiair missile radars. After fabrication of the radio receiver in FY 1979, design of the ALQ-5 complying with modification of the C-1 aircraft and partial fabrication of the system is planned for FY 1980. The fabricated system, to be delivered to the TR&DI in FY 1982, will undergo airborne tests in FY 1983. The ALQ-5 will be completed in FY 1984.

The ALQ-8 will be mounted on the F-15 to jam an enemy plane's fire control and antiair missile radar systems. Fabrication of its main body in FY 1980 follows technical research in FY 1979. Airborne tests of the ALQ-8 will start in FY 1981. It will be completed in FY 1982.

CSO: 4120

## TR&DI TO PROCURE PRECISION MISSILE SIMULATOR IN FY 1980

Tokyo JPE AVIATION REPORT-WEEKLY in English 13 Feb 80 p 9

[Text]

As a major step forward to promote studies on precision guided missiles, the TR&DI will procure a new precision missile simulator in FY 1980 with an authorized amount of ¥650 million. The missile simulator presently in use by the TR&DI is inadequate since it was designed primarily for development of radar-homing missiles. An advanced simulator is required for research work on new missiles such as those guided by laser, infrared, and image homing systems required by the Self-Defense Forces.

It is planned that the core of the new simulator will be imported while peripheral systems will be developed locally as was the case with the current simulator.

CSO: 4120

## JAPANESE TEAM FINDS METEORITES IN ANTARCTICA

OW181217 Tokyo KYODO in English 1158 GMT 18 Feb 80 OW

[Text] Tokyo, 18 Feb, KYODO--About 3,000 meteorites, including a considerable number of carbon samples which may hold the key to trace the secret of life, have been collected by a Japanese geological team in the Yamato mountain range in Antarctica.

According to reports received Monday by the Ministry of Education from Michio Yamazaki, chief of the 20th Antarctic observation group, these meteorites, frozen and placed in germ-free stainless containers, will be forwarded to Japan on board the icebreaker Fuji for analysis.

They are scheduled to arrive in Tokyo on 19 April.

The 3,000 meteorites are about 1.5 times as many as the approximately 2,000 meteorites thus far collected on earth, the ministry official said.

Great expectations are placed on these meteorites because they may help to unravel the mystery of life that might have existed several billion years ago.

The meteorites were collected by the eight-member geological team which has joined the Antarctic observation group headed by Yamazaki.

For four months until 9 February, the team scoured the Yamato mountain range, about 300 kilometers southwest of Japan's Showa base as well as on another mountain range about 200 kilometers southwest of the Yamato range.

Meteorites are the best study material for mankind to reconstruct events and developments going back four to 4.6 billion years ago when the solar system is believed to have been created.

Since Antarctica is the least polluted region on earth, the meteorites collected there are regarded as extremely valuable material for scientific study.

CSO: 4120

## ASDF TO LAUNCH MT-X DEVELOPMENT IN FY '81

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 6

[Text]

The Air Self-Defense Force (ASDF) is expected to start development of the MT-X next-generation medium-class jet trainer in FY 1981 (April 1981-March 1982) for completion in FY 1987. Funds were included in the FY 1980 budget draft for fabrication of the XF-3 turbofan engine designed for the aircraft.

It has tentatively planned that the basic design of the MT-X airframe will be conducted in FY 1981, detailed design in FY 1982, fabrication of experimental aircraft in FY 1983-84, followed by technical and operational tests which will last for about two years. Full-scale production is slated to begin in FY 1988. The plan also calls for fabrication of preproduction aircraft in FY 1986 or between the first flight of the prototype in FY 1985 and full-scale production.

Fabrication of the XF-3 engine will be promoted by the Technical R&D Institute (TR&DI) of the Defense Agency. In the engine development program, a second experimental engine has already produced a thrust of 1.6 tons. The FY 1980 budget draft authorized five of the 10 engines to be fabricated, promising major progress in the XF-3 program.

The MT-X will be designed to replace the T-33 and T-1 trainers to reduce jet training time to 300 hours from the current 400 hours. It will also be used for other utility missions, including towing target drones.

CSO: 4120

## TR&DI PLANS XF-3 ENGINE TESTS

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 7

[Text]

Following procurement of five units in FY 1980, the TR&DI will procure another five units of the XF-3 small fan jet engines. All ten engines will be used for pre-flight rating testing (PFRT) which covers foreign object ingestion, over-rotation, inlet air distortion, high-altitude performance, in-flight, endurance, and other aspects. These engines will be delivered to TR&DI by FY 1982 for testing throughout FY 1983.

Utilization of USAF facilities for high-altitude tests is being planned since Japanese facilities are incapable of such testing. The Arnold Engine Development Center of the USAF is being eyed for the XF-3 engine testing. A contract through the FMS (foreign military sales) procedure is being considered, according to sources.

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## SPACE SCIENCE SPECIALISTS VISIT CHINA

Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 pp 8-9

[Text]

A Japanese space and technology mission from the Space Development Promotion Council of Keidanren (Federation of Economic Organizations of Japan) recently completed a report on its 12-day tour of China. The mission was invited by the Chinese Academy of Space Technology in October through the Sino-Japanese Science and Technology Exchange Association.

Led by Dr. Osamu Nagano, an adviser to IHI, the mission visited twelve research facilities and plants devoted to space science. The facilities visited included a space equipment plant, a research laboratory on control systems, rocket motor testing and other laboratories mainly located in Beijing. The mission discussed with Chinese specialists the scope of technical exchange, possibilities of trade of space equipment and parts. Japanese experiences with technical exchange and collaboration with Western countries were also discussed.

According to the mission's report, China began development of artificial satellites in 1958. In 1970, the first Chinese satellite was successfully launched. By 1978, eight Chinese satellites had been or were in orbit. Development of space rockets also started in 1958. For launching of satellites, liquid-propellant rockets (for ballistic missiles) are being utilized.

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## BRIEFS

PROGRAM FOR TASS DEVELOPMENT--The TR&DI with authorized funds of about ¥200 million in FY 1980, will continue development of the TASS (towed array surveillance system). Related shipborne equipment such as display units will be fabricated during FY 1980. Fabrication of the TASS components started in FY 1977. Tow cables, submerged vehicles and recovery equipment are among the items already developed. Following development of software in FY 1980, the TR&DI expects to complete a prototype in FY 1981. It will undergo evaluation tests with a MSDF ship fitted with a variable depth sonar. [Text] [Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 7]

MINE-SWEEPING SYSTEM--The TR&DI is planning to start development of a new mine-sweeping system to meet requirements of the MSDF. The new system is provisionally called the S-7 system which is the latest of the "S" series of mine-sweeping systems in service with the MSDF. Although details are unknown, the S-7 system will use a special platform that will operate near the sea bottom and will clear mines with automatic equipment. The current mine-sweeping systems use acoustic, magnetic, or pressure sensors. The program is expected to be included in the budget requests for FY 1981. [Text] [Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 7]

FUSE DEVELOPMENT PROGRAM--The TR&DI/MSDF program for development of a new fuse has been authorized to continue in FY 1980. The new fuse is intended for use with ammunition for the 3-inch rapid firing gun and the 76-mm OTO Melara gun. The first phase of the program started in FY 1979. Japan Electronics (Nihon Denshi) was awarded a ¥135 million contract to fabricate an experimental fuse. Now that continuation of the program has been authorized, the TR&DI/MSDF plans to finalize test programs during FY 1981-83. It is expected that the new fuse will be adopted during the FY '78 MTDP covering FYs 1980-84. [Text] [Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 8]

MICV DEVELOPMENT TO START IN APRIL--Although the original request for ¥2,500 million was reduced to ¥650 million, the TR&DI will start development program for a MICV (mechanized infantry combat vehicle) in FY 1980 beginning April 1, on behalf of the GSDR. The TR&DI originally planned to develop two prototypes which would be superior to both European and Russian MICVs currently in service or under development. The former is armed with 20 to 30mm guns and the latter with a 76mm gun. With the cut in required funds, however, the TR&DI will concentrate efforts on development of a gun and turret in FY 1980. It is expected that the TR&DI will make further requests for funds in FY 1981 budget to fabricate full-scale prototypes. [Text] [Tokyo JPE AVIATION REPORT-WEEKLY in English 20 Feb 80 p 8]

TECHNOPOLIS 90--Tokyo, 7 Feb, KYODO--An experimental city with an accumulation of frontier industries may emerge somewhere in Japan in the 1980s. The city, called "Technopolis 90," will be designed to combine industrial, academic and residential quarters into a trinity with public facilities in the core. The "Technopolis 90" program will feature an industrial policy vision for the 1980s to be released by the Ministry of International Trade and Industry in March. A group of researchers are scheduled to meet for the first time Friday for a discussion of the program. The plan calls for locating sophisticated electronic parts, computer, aviation, aerospace, ocean industries and think tanks at the industrial quarter. The academic section will have research institutes for frontier technology and professional schools for skilled labor. Many public facilities like stadiums will be established at the residential area which is a place for recreation. New traffic means and energy-saving systems will be widely introduced in the Technopolis 90. The Ministry of International Trade and Industry intends to construct the Technopolis not in a mountain, forest or in a wasteland but in an existing provincial city or an industrial park. [Tokyo KYODO in English, no time given, 7 Feb 80 OW]

'INTERFERON' TO BE MASS-PRODUCED--Tokyo, 30 Jan, KYODO--The Research Development Corporation of Japan decided Wednesday to extend large-scale financial assistance to two Japanese pharmaceutical companies to help them mass produce "interferon," a protein which can cure chronic hepatitis and influenza. The two firms which will receive subsidies amounting to yen 1.75 billion are Toray Industries Co. and Green Cross Corp., both of Tokyo. Corporation officials said the two firms will be responsible for developing the technologies for mass production of interferon within the next five years. The subsidies will consist of yen 870 million to Toray and yen 880 million to Green Cross Corp., they said. Interferon has been found promising as a specific remedy against chronic hepatitis, influenza and other viral disease in humans. Green Cross Corp. has developed a unique method of obtaining large quantities of highly purified interferon from human blood for use against hepatitis. Toray is now using a different method in mass producing interferon consisting of viral induction of various cells and double strained ribonucleic acid (RNA). Medical experts at major national hospitals in various prefectures will test antivirus, antitumor and anticellular functions of the medicine produced by the two pharmaceutical firms. The corporation's subsidies will be used also for checking the therapeutic effect of this medicine, they said. [Tokyo KYODO in English, no time given, 30 Jan 80 OW]

END

CSO: 4120

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